# Careers in the agri-food system

Agriculture Canada

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# AGRICULTURE AND FOOD

## Canada's biggest business

Although many people don't realize it, the business of growing, processing and selling food is the biggest in Canada and throughout the world. About a quarter of all Canadian jobs relate to agriculture and food.

When you think of agriculture, you probably think of farming. But before Canadian farmers actually begin their work, hundreds of thousands of people have already conducted research, built farm machinery, and developed and tested fertilizers and pesticides. After the products leave the farm gate, many more people become involved in grading, inspection, transportation, processing and marketing.

Many of the most important and rewarding jobs in agriculture are performed by graduates of Canada's faculties and colleges of agriculture. Some are engaged in highly sophisticated research in such fields as genetics or chemistry. Others are teachers and professors, or work as agricultural advisors, veterinarians or administrators. Some are agricultural journalists for newspapers, magazines, radio and television. Many travel abroad, helping poorer countries increase their food production. The variety of occupations is almost limitless.

The demand for graduates in agriculture continues to grow along with that for food. Canadian food production is expected to accelerate in coming years and we'll need qualified graduates to provide the know-how; those with bachelor's, master's, and doctoral degrees will all be wanted. Canada now supplies less than half of the Ph.D.s employed in this field. When qualified candidates cannot be found in Canada, trained people from other countries fill available positions.

## Production

Canada's farmers produce most of the food eaten by Canadians as well as a surplus for export. Because world population growth is accelerating, they must increase their productivity just to continue to feed the same proportion of that population.

Farming has changed from a largely self-sufficient way of life to an exciting, capital-intensive, highly mechanized business. These new farms range from hydroponic tomato and cucumber greenhouses through huge grain enterprises to controlled-environment pork and poultry production units.

This sector of the food system needs skilled managers and advisers ... you, perhaps?

## Research

A great deal of the credit for Canada's improved agricultural productivity must go to researchers. Our scientists have been responsible for significant achievements including new crop varieties, improved feeding and management techniques for livestock, and increased mechanization.

Agricultural scientists are involved in any of a number of research areas, including soils, plant and animal breeding, pest management, engineering, economics, nutrition and sociology.

With the development of biotechnology and its growing application to agriculture, opportunities will increase for trained people who can apply techniques such as gene splicing to the development of improved crops and livestock.

Most agricultural scientists work for governments and universities, although a considerable number are to be found in private industry. With the continued growth of private research, your opportunities in the private sector will increase.

## Processing and marketing

Food processors and distributors are major employers of graduates. For many commodities, marketing boards and producers' associations coordinate production and promote orderly marketing. These organizations often provide exciting career opportunities. Other groups, representing various producer and processor interests, also offer employment.

## Supplies and services

A business as large and diverse as Canadian agriculture needs an extensive supply and service structure. Many grads begin careers with suppliers of fertilizers, machinery, feeds and chemicals. Agricultural economists work for banks and other financial institutions with an interest in agriculture. Engineers find employment with farm machinery manufacturers and designers and builders of farm structures and equipment.

As farmers become more dependent on purchased inputs and borrowed capital, opportunities in the supply and service industry grow.

## Education, extension and communications

Graduates working in education, extension and communication are involved in one of the most important tasks in modern agriculture, the transfer of information. Many become teachers and professors at colleges and faculties of agriculture, where they sometimes advance to senior faculty positions. The most widely known extension specialists are the local agricultural representatives or district agriculturists that work for provincial ministries of agriculture. They see that farmers get, and are able to use, the most up-to-date information possible.

Many other opportunities await in the electronic and print media.

## Consulting

Growing numbers of graduates are engaged as consultants. They cover a wide field — farm management and appraisal, land use, financial planning, livestock improvement and so on. Many are self-employed while others work for established companies. For many graduates, consulting offers an exciting career.

## International development

Some of the most rewarding jobs will take you overseas. Canadian University Services Overseas (CUSO) regularly recruits graduates while the Canadian International Development Agency, the Food and Agriculture Organization of the

United Nations and External Affairs Canada seek experienced graduates for service in distant lands. Our agricultural experts work in such places as China, Senegal, Peru and Tanzania, helping local farmers apply up-to-date technology and methods.

International development opportunities exist if you specialize in horticulture, agronomy, livestock breeding, agricultural engineering, teaching and a host of other fields. Many who have served abroad consider the experience one of the most rewarding and enriching of their careers.

## Agrology

At the provincial level, professional institutes further the interests of agrologists and maintain standards. In some provinces, membership is mandatory for degree-holders working in agriculture and you must be a member to use the designation "agrologist".

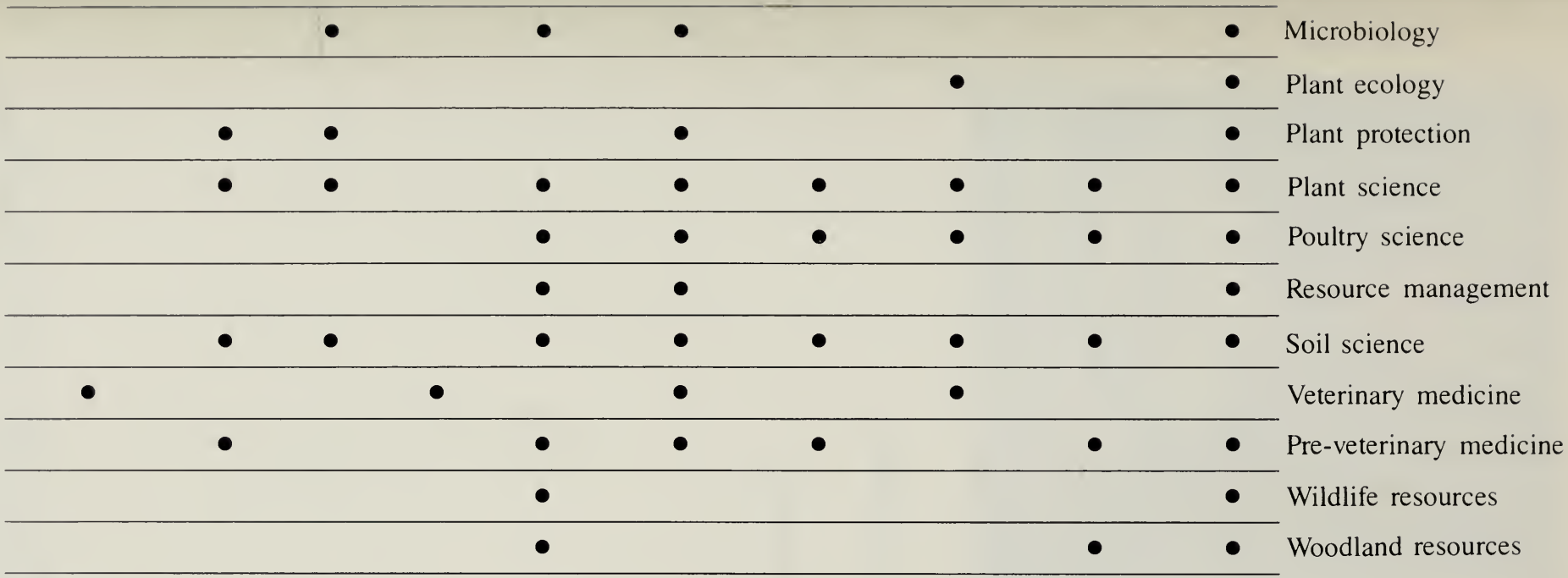
In addition, graduates may belong to agriculture-related scientific societies. These bring together those interested in a particular discipline such as animal science, agricultural engineering, agricultural economics or soil science. There are about 8000 professionals in agriculture across the country.

## Where to study

Canada has many post-secondary agricultural schools. There is one faculty of agriculture in the maritimes and at least one in each of the other provinces. Entrance requirements for degree programs are similar to those for other science faculties. You can get more information about courses available and entrance requirements from the universities or technical agricultural colleges.

| | Agricultural economics | Agricultural engineering | Animal science | Dairy science | Entomology | Environmental biology | Food science | General agricultural science | Horticulture | Landscape architecture |
|---|---|---|---|---|---|---|---|---|---|---|
| The University of British Columbia Vancouver, B.C. V6T 1W5 | • | • | • | • | • | | • | | • | • |
| The University of Alberta Edmonton, Alta. T6G 2E8 | • | • | • | • | • | | • | • | | |
| The University of Saskatchewan* Saskatoon, Sask. S7N 0W0 | • | • | • | • | | | • | | • | |
| The University of Manitoba* Winnipeg, Man. R3T 2N2 | • | • | • | • | • | | • | | • | |
| Ontario Agricultural College* University of Guelph Guelph, Ont. N1G 2W1 | • | • | • | • | • | • | • | • | • | • |
| Macdonald College* McGill University Ste. Anne de Bellevue, Que. H9X 1C0 | • | • | • | | • | • | • | • | • | |
| University of Montreal St. Hyacinthe, Que. J2S 3A0 | | | | | | | | | | |
| Laval University Ste. Foy, Que. G1K 7P4 | • | • | • | | | | • | • | | |
| Nova Scotia Agricultural College* Truro, N.S. B2N 5E3 | • | • | • | | | | | | | |
| Atlantic Veterinary College University of Prince Edward Island Charlottetown, P.E.I. C1A 7P3 (September 1986) | | | | | | | | | | |

* Also offers a 2-year diploma program


Microbiology
Plant ecology
Plant protection
Plant science
Poultry science
Resource management
Soil science
Veterinary medicine
Pre-veterinary medicine
Wildlife resources
Woodland resources

In addition to the universities offering degree programs, the following technical agricultural colleges offer a 2-year diploma program.

Institut de technologie agricole
La Pocatière, Que.
G0R 1Z0

Institut de technologie agricole
et alimentaire
St. Hyacinthe, Que.
J2S 2M2

Collège de technologie agricole
et alimentaire d'Alfred
Alfred, Ont.
K0B 1A0

Centralia College of Agricultural Technology
Huron Park, Ont.
N0M 1Y0

Kemptville College of Agricultural Technology
Kemptville, Ont.
K0G 1J0

New Liskeard College of Agricultural Technology
New Liskeard, Ont.
P0J 1P0

Ridgetown College of Agricultural Technology
Ridgetown, Ont.
N0P 2C0

Fairview College
P.O. Box 3000
Fairview, Alta.
T0H 1L0

Lakeland College
Vermilion, Alta.
T9V 0W2

Olds College
Olds, Alta.
T0M 1P0

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